



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,436	08/01/2003	Michael F. Thomashow	21835-00004	3828
27144 7590 12/17/2007 FOSTER, SWIFT, COLLINS & SMITH, P.C. 313 SOUTH WASHINGTON SQUARE LANSING, MI 48933			EXAMINER KUMAR, VINOD	
			ART UNIT 1638	PAPER NUMBER
			MAIL DATE 12/17/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/632,436	<b>Applicant(s)</b> THOMASHOW ET AL.	
	<b>Examiner</b> Vinod Kumar	<b>Art Unit</b> 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 9, 11, 12, 17, 20-24 and 26-31 is/are pending in the application.
- 4a) Of the above claim(s) 9, 11 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12, 20-24 and 26-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Status of Objections and Rejections***

1. Office acknowledges the receipt of Applicant's response filed on October 3, 2007. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Claims 9, 11-12, 17, 20-24, and newly added claims 26-31 are pending. Claims 12, 20-24, and newly added claims 26-31 are examined on merits in the instant Office action. All previous claim rejections not set forth below have been withdrawn in view of claim amendments filed in the paper of October 3, 2007. This action is made FINAL.

### ***Election/Restrictions***

2. Claims 9, 11, and 17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on August 30, 2005. The restriction was made FINAL in the Office action mailed on November 4, 2005.

This application contains claims 9, 11, and 17 drawn to an invention nonelected with traverse in the reply filed on August 30, 2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

3. Claims 12, 20-24 remain, and newly added claims 26-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claim 12 and newly added claim 26 contain **NEW** subject matter "exposing said plant to drought stress so that transcription regulating protein in the plant is expressed" in claim 12, and "exposing said plant to cold stress so that transcription regulating protein in the plant is expressed" in newly added claim 26, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention for the reasons of record stated in the Office action mailed on May 1, 2007. Applicants traverse the rejection in the paper filed on October 3, 2007.

Applicant argues that claim amendment filed in the paper of October 3, 2007 should overcome this rejection (response, page 7, last paragraph).

Applicant's argument was fully considered but was not found to be persuasive. It is maintained that the specification does not provide written description support for the claimed method in which SEQ ID NO: 1 would be expressed only after treating with drought or cold stress. For example, SEQ ID NO: 1 operably linked to a non-inducible promoter would not require drought (claim 12) or cold (claim 26) stress treatment. This

does not comply with written description requirements. It is maintained that amended claims still read on expressing SEQ ID NO: 1 under any promoter which includes a non-inducible and constitutive promoter. A non-inducible constitutive promoter would not require the method step of exposing plants to drought (required by claim 12, emphasis added) or cold (required by claim 26, emphasis added) stress so that SEQ ID NO: 1 is expressed. The specification does not support the amended method step as recited in the claims 12 or 26. Dependent claims 20-24, and 27-31 also remain rejected because they fail to overcome deficiencies of claims 12, and 26, respectively.

Claims 12, and 20-24 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons of record stated in the Office action mailed on May 1, 2007. Applicant traverses the rejection in the paper filed on October 3, 2007.

Applicant argues that claim amendment filed in the paper of October 3, 2007 should overcome this rejection (response, page 8, first paragraph).

Applicant's arguments were fully considered but were not found to be persuasive. It is maintained that claim 12 and claims dependent thereon are incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. Preamble recites "A method for regulating dehydration regulatory genes", however, line 6 of the claim recites "drought regulatory gene is expressed". Paragraph 0038 of specification refers dehydration stress to drought, high salinity and other conditions, which cause a decrease in cellular water potential in plant. It is unclear why

only drought gene would be expressed, when the method is directed to regulate dehydration regulatory genes. Accordingly the rejection is maintained.

***Claim Rejections - 35 USC § 102***

4. Claims 12, 20-24 remain, and newly added claims 26-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Harper et al. (United States Patent Publication 2002/0160378; filed August 24, 2001) taken with the evidence of Kagaya et al. (Nucleic Acids Research, 27:470-478, 1999) for the reasons of record stated in the Office action mailed on May 1, 2007. Applicant traverses the rejection in the paper filed on October 1, 2007.

Applicant argues that the accompanying 37 C.F.R. § 1.132 Declaration states that data pertaining to RAV1 gene response to cold stress using microarray gene expression technique was obtained before August 24, 2001, and thus the Applicant invented the claimed embodiment before Harper et al. (response, page 6, lines 1-4).

Applicant's arguments were fully considered but were not found to be persuasive. It is noted that Applicant's Declaration filed under 37 C.F.R. § 1.132 to establish the invention of the subject matter of the rejected claims prior to the effective date of reference is **improper**. For swearing back of a reference to overcome prior art rejections under 35 U.S.C. 102(a) or 102(e), Applicants are advised to see MPEP 715 [R-3] under "Swearing Back of Reference — Affidavit or Declaration Under 37 CFR 1.131".

It is also noted that Applicant's note book record filed in the paper of August 21, 2007 fails to establish the following about the instantly claimed invention: a) conception of the instantly claimed invention prior date to the reference, b) diligence from the prior date to the date of reduction to practice, and c) actual reduction to practice.

Applicant further argues that Harper et al. SEQ ID NO: 2316 in US Provisional Application No. 60/227,866 filed on August 24, 2000, US provisional Application No. 60/264,267, filed January 26, 2001 and US Provisional Application No. 60/300,111, filed June 22, 2001 do not disclose SEQ ID NO: 1 (response, page 6, lines 7-30).

Applicant's arguments were fully considered but were not found to be persuasive. Harper et al. filed on August 24, 2001 constitutes a prior art under 35 USC 102(e), and Applicant's declaration filed in the paper of October 3, 2007 is improper and defective for the reasons as discussed above. Accordingly, Applicant's arguments about US Provisional applications of Harper et al. are insufficient to overcome the rejection.

Accordingly, the rejection is maintained.

### ***Conclusions***

5. Claims 12, and 20-24 remain, and newly added claims 26-31 are rejected.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is set to expire within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinod Kumar whose telephone number is (571) 272-4445. The examiner can normally be reached on 8.30 a.m. to 5.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



PHUONG T. BUI  
PRIMARY EXAMINER